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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,143	12/09/2003	Kouta Fukui	FS-F03215-01	5961
37398	7590	06/12/2007	EXAMINER	
TAIYO CORPORATION			CHEA, THORL	
401 HOLLAND LANE				
#407			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22314			1752	
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			06/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/730,143	<b>Applicant(s)</b> FUKUI, KOUTA	
	<b>Examiner</b> Thorl Chea	<b>Art Unit</b> 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 8-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 8-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This office action is responsive to the communication on May 30, 2007; claims 1, 3-5, 8-10 are pending; and claims 2, 6-7 and 11-19 have been canceled.
2. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on May 30, 2007 has been entered.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3-5, 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claiming the compound represented by the following formula (H) in an amount from 10<sup>-5</sup> mol to 1 mole per mol of non-photosensitive organic silver salt raises the issue of new matter. Page 172, lines 3-5 of the present specification disclosure show the amount of 10<sup>-5</sup> mol to 0.5 moles per mole of the non-photosensitive silver salt of the image forming layer. Therefore,

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specification as originally filed fails to disclose the amount within the range of  $10^{-5}$  mol to 1 mole per mol of non-photosensitive organic silver salt.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-5, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toya et al (US Patent No. 5,998,126), Siga et al (US Patent No. 4,332,889), Suzuki (US Patent No. 5,656,419) et al (US Patent No. 4,211,839), EP 1096310 (EP'310), Matsumoto et al (US Patent No. 5,958,668), and Toya et al (US Patent No. 5,656,419).

Toya et al (US Patent No. 5,998,126) discloses a photothermographic material substantially as claimed. The photographic material contains a photosensitive silver halide material, a non-photosensitive silver salt of an organic silver salt, a reducing agent for the organic silver salt, binder, and wherein silver halide having grains size from 0.01 to 0.08 nm and silver halide including silver iodide and silver iodobromide grains having iodide content of 0.1 to 40 mole % in column 16, 50-64; the reducing agent including the bisphenols, antifoggant including halogen substituted organic compound, and the material absorb laser having wavelength of 300 nm to 700 nm. See column 34, claims 1-12; column 16, lines 50-64; column 32, lines 20-25; column 19, lines 34-39. Siga et al (US Patent No. 4,332,889) disclose silver halide containing at least 30 mole % based on the silver halide component; more preferably at least 50 mole % based on silver halide component; the silver halide may include only silver iodide i.e. 100 mole % of

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silver iodide; the most preferred silver halide component consisting of silver iodide and silver bromide, and the molar ratio of silver iodide to silver bromide may be preferably 30/70 to 98/2, more preferably 50/50 to 95/5. The silver halide provides a practically usable post-activation type dry image forming material excellent enough in both stability and sensitivity. See column 6, lines 44-68 and column 2, lines 5-10.

Matsumoto et al (US Patent No. 5,958,668) in column 18 discloses an additive for a photothermographic material including a bisphenol compound; a polyhalogenate compound having of formula within the scope of formula (H) of the claimed invention within an amount of 10 mole % to 40 mole % based on the organic silver salt, and silver halide including silver iodobromide and silver iodide. See column 18, line 30 wherein a bisphenol compound having formula within the scope of formula R-1 of the present claimed invention; the polyhalogenate compound in column 6, lines 25-50 and the amount thereof in abstract; and the silver iodobromide and silver iodide in column 17, line 38.

Toya et al (US Patent No. 5,656,419) discloses a polyhalogenate compound within the scope of formula (H) of the present claimed invention within an amount of  $10^{-4}$  mol to 1 mol/mol of Ag. See column 2, line 5, and compound II and column 16, lines 54-60.

Suzuki et al (US Patent No. 5,656,419) in column 15, lines 35-68, discloses a bisphenol compound and in column 16, lines 1-68 disclose that suitable reducing agent are selected depending upon the kind of organic silver salt used. Acceptable reducing agent/organic silver salt can be easily determined by a simple test. For example, a sample reducing agent is mixed with a coating solution containing the organic silver salt, and the mixed coating solution coated on a support. The reducing agent may be use as combination of two or more thereof. The combined

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use of two or more poly-phenolic reducing agent having alkyl group at the two substitution position adjacent to the hydroxyl-substituted position of the aromatic nucleus is effective for preventing discoloration upon exposure to light. EP'310 discloses the known bisphenol that a carbon bonding the benzene ring is secondary or tertiary or primary. See the bisphenol compound on pages 6-10 and the compound (I) on page 3.

The additives for the photothermographic material claimed in the present claimed invention such as bisphenol reducing agent taught in EP'310 and Suzuki et al; the silver iodide, silver iodobromide taught in Toya et al Siga et al and Matsumoto et al; and the polyhalogenate compound taught in Matsumoto et al and Toya et al within the amount claimed in the present claimed invention such as presented in the above paragraphs. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to form a photothermographic material using an known additives including the use one or more bisphenol compound known in the art such as taught in Suzuki et al and EP'310 in combination with silver iodide and the polyhalogenate compound taught in Toya et al Siga et al and Matsumoto et al with a reasonable expectation of achieving a photothermographic material which is effective for preventing discoloration upon exposure to light and having with long shelf life and high image density, and thereby provide a material as claimed.

### ***Response to Arguments***

7. Applicant's arguments filed on May 30, 2007 have been fully considered but they are not persuasive for the reason set forth in Examiner's Answer and the Board of Appeal decision rendered on March 30, 2007. The applicants appear to argue the reference individually while the rejection is based on the combination of the applied prior art of record. One cannot show

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nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Photosensitive silver halide having silver iodide of 100 mole % is read on the silver iodide taught in Toya et al ('126) in column 16, line 53; Toya et al ('419) in column 20, lines 14' and Matsumoto et al ('668) in column 17, line 38. Siga et al discloses the relationship between the molar ratio of silver iodide and silver bromide to provide the photothermographic material in term of sensitivity and post image stability such as shown in above. In term of image post-stability, the worker of ordinary skill in the art would have selected the silver iodide discloses in Toya et al and Matsumoto et al; or silver halide with high iodide content taught in Siga et al. The applicants appears to argue with respect to the range of 70 % to 100 % by mole, rather than the type of silver halide such as silver iodide which is read on 100 % by mole of silver iodide. The bisphenol compound have been commonly known as in the photothermographic art as reducing agent for silver salt of an organic acid such as taught in each of the above references especially EP'310 and Suzuki et al. The use of one or more bisphenol compound have been known such as shown in the previous office action and the opinion of the Board of Appeal and Interferences on March 30, 2007.

The applicants argue that the improvement of color tone of the silver image would have been unexpected since the applied prior art of record fails to teach this improvement of color tone of the silver image and photothermographic stability. The applicants rely on the Declaration under 37 CFR 1.132 to support the results.

It is the Examiner's position that the results presented in the argument fails to overcome the prima facie case of obviousness rejection. The Declaration is not commensurate with the scope

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of the claimed invention. The applicants are referred to the scope the reducing agent R-1, R-2 and the scope of formula (H) with respect to the scope of reducing agent of formula 1-9, 1-1, 2-3 and polyhalogenate compound 4-1 and 4-8, especially the substituent associated with the compound. “ The data is not reasonably commensurate in scope with the claims, which, as drafted, are broad in scope and cover mixtures of numerous untested compounds. Lindner, 457 F. 2d at 508, 173 USPQ at 358.” In this case, there are a numerous compound within the scope of formula R-1, R-2 and (H) have not been tested, and the applicants fails to show as to why the specific compound used in the Declaration represent the hole scope of the compounds. It is not apparent and applicants have not explained, why one of ordinary skill in the art would have extrapolated the results obtained to plethora of combination encompassed by the claimed invention. *In re Susi*, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). The applicants are also referred to the material prepared accordingly to the Experiment No.1 in the specification disclosure and the scope of the material claimed in the present claimed invention. See especially the additives on page 22, lines 4-17. This color tone would not achieve in the absence of using the color tone such as phthalazine or pigment and the other additives presented therein. It has been known in the applied prior art of record to use the color toner to improve the color tone thereof. See fro instance Toya '419 in column 18, lines 41-68 or Matsumoto et al ('668) in column 18, lines 63-68 which used the color toning to adjust the color tone. Therefore, the improvement of color tone is taught and would have expected by the worker of ordinary skill in the art.



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*Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tc  
June 7, 2007



Thorl Chea  
Primary Examiner  
Art Unit 1752